

# APPENDIX C

## DATA CENTER STATEMENT OF WORK (DC SOW)

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## **1 INTRODUCTION**

This Data Center Statement of Work (DC SOW) defines the HHSDC services required to implement, operate, and maintain the infrastructure that supports the Case Management Information and Payrolling System (CMIPS II) application and In-Home Supportive Services (IHSS) Program business processes. The services are categorized by:

- Project Management
- Technical Processes
- Supporting Processes

Project management includes the activities to plan and control the Project scope, schedule, staffing, and budget of Data Center services. The technical processes include the activities to acquire, implement, operate, and maintain CMIPS II infrastructure and to assist, at the direction of the State Project Manager, the Contractor in design, development, implementation, operation and maintenance of CMIPS II. The supporting processes include communications, configuration management, quality assurance, and issue resolution and subcontractor management.

## **2 BACKGROUND**

### **2.1 Project Organization**

The Data Center will establish an organization to acquire, implement, operate, and maintain the CMIPS II infrastructure. The Data Center will interact with the Contractor, CDSS Adult Programs Branch, and the CMIPS Project Office. The Data Center may also interact with other stakeholders defined in the Contractor SOW. The following paragraphs provide a broad overview of the roles of these organizations.

#### **2.1.1 Contractor**

The CMIPS II Contractor develops, designs, and implements CMIPS II as detailed in the Contractor SOW. The Contractor defines the specifications for the Data Center hardware and software for CMIPS II. If there is a conflict or discrepancy between the RFP Section 6 Statement of Work and the Appendix C - Data Center Statement of Work the RFP Section 6 Statement of Work takes precedence.

The Contractor and Data Center shall jointly maintain and operate CMIPS II. The Contractor, in addition to other responsibilities, will be responsible for monitoring and reporting on the system end-to-end performance including the Data Center and county components. The Contractor will be responsible for coordinating, tracking, and reporting on all problems through resolution.

### **2.1.2 California Department of Social Services (CDSS) Adult Programs Branch (APB)**

The CDSS APB is the Project sponsor and is responsible for the success of the IHSS/PCSP Program and its supporting systems, Legacy CMIPS System and CMIPS II. CDSS APB is responsible for the policies, rules, regulations, and requirements as they apply to the IHSS/PCSP Program. CDSS provides funding and oversight for the CMIPS II procurement Project. CDSS will provide Independent Validation and Verification (IV&V) of HHSDC.

CDSS also provides IHSS/PCSP subject matter expertise for defining business requirements and participating in user acceptance testing. CDSS APB will review and approve the proposed CMIPS II and any changes.

### **2.1.3 Health and Human Services Agency Data Center (HHSDC)**

#### **2.1.3.1 CMIPS Project Office**

At the request of the Project sponsor, the HHSDC CMIPS Project Office is responsible for managing the activities in support of the CMIPS II procurement.

The CMIPS Project Office provides project management and oversight including status reporting, assessing and mitigating risk, facilitating communications and teamwork among stakeholders, resolving issues, and managing resources. The CMIPS Project Office oversees activities associated with CMIPS II design, development, implementation, operation, and maintenance. The CMIPS Project Office verifies and validates Contractor processes and deliverables. The CMIPS Project Office also monitors and reports the development and implementation status of external partners to include county offices, and interface entities.

The CMIPS Project Manager, to be referred to as the State Project Manager in this document, is responsible for the success of the CMIPS Project and, as such, will oversee the Data Center activities.

#### **2.1.3.2 HHSDC Services**

HHSDC provides the services for CMIPS II to include:

- Establish connectivity to the HHSDC WAN
- Monitor and manage the HHSDC WAN
- Support access services including the ability to access CMIPS II from a dial-up connection or over a secure Internet connection
- Maintain physical security.
- Support the CMIPS II infrastructure
- Support Operating System and Database servers

The Contractor is responsible for overall project schedule and system availability that includes the network solution implemented and maintained by HHSDC and, as such, will work closely

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with HHSDC to ensure the schedule and availability meet requirements. This joint responsibility will include concise and detailed division of responsibilities.

The Data Center shall work with the Contractor in joint responsibility for implementing and maintaining the network solution. This joint responsibility shall include concise and detailed division of responsibilities.

### 2.2 Project Constraints

The Data Center shall, in the acquisition, implementation, operation, and maintenance of the CMIPS II infrastructure, comply with and ensure that CMIPS II complies with all laws. The State will provide expertise as to the legal, as well as program and operational requirements of the IHSS/PCSP Program. The Data Center shall provide expertise regarding all other legal requirements. The legal citations and references provided in this document are believed to be accurate. However, no representation is made that the legal information provided is in fact complete and accurate and the Data Center shall independently determine, validate, and implement all legal requirements necessary for the lawful operation of CMIPS II system.

### 2.3 Project Assumptions And Dependencies

1. The Data Center will purchase and provide all required resources to meet its obligations under the Project schedule for the WAN.
2. Counties will purchase and provide all required resources to meet counties' obligations under the Project schedule.
3. The Data Center, CDSS, and counties will provide staffing to meet their obligations under the Project schedule.
4. Interface agencies will provide resources and staffing to meet their obligations under the Project schedule.
5. The Incumbent Contractor will provide resources and staffing to meet its obligations under the Project schedule.
6. The Contractor will purchase and provide all required resources and staffing to meet their obligations under the Project schedule.

## 3 PROJECT MANAGEMENT

The Data Center is responsible for successfully planning and executing the managerial, technical, and supporting processes. For planning purposes, the project is divided into two major parts: Design, Development, and Implementation (DDI); and Maintenance and Operation (M&O). DDI starts at Contract award and ends with the State's acceptance of statewide CMIPS II operation. M&O starts when the first county is successfully implemented. If the counties are implemented incrementally, the DDI and M&O portions will overlap.

### 3.1 Project Planning

1. The Data Center shall develop and deliver a **Data Center Master Plan** to describe how the Data Center meets the requirements of this SOW to include:
  - a. Project Management to include
    - i) Data Center organization
    - ii) Data Center roles and responsibilities
    - iii) Project Planning described in Paragraph 3.1, Project Planning
    - iv) Project Control described in Paragraph 3.2, Control Processes
  - b. Technical Processes to include:
    - i) Data Center Site Preparation described in Paragraph 4.1.1, Data Center Site Preparation
    - ii) CMIPS II DDI Support described in Paragraph 4.1, CMIPS II DDI Support
      - (1) System Test and Evaluation described in Paragraph 4.1.3, CMIPS II System Test and Evaluation
      - (2) Testing Support described in Paragraph 4.1.3, CMIPS II System Test and Evaluation
      - (3) Statewide Implementation described in Paragraph 4.1.4, Statewide Implementation
    - iii) Data Center Operational Services described in Paragraph 4.2, Data Center Operation Services
    - iv) Data Center Maintenance and Enhancements described in Paragraph 4.3, Data Center Maintenance and Enhancements
  - c. Supporting Processes to include:
    - i) Communication described in Paragraph 5.1, Communication
    - ii) Configuration Management described in Paragraph 5.2, Configuration Management
    - iii) Quality Assurance described in Paragraph 5.3, Quality Assurance
    - iv) Issue Resolution described in Paragraph 5.4, Division of Responsibilities
2. The Data Center shall supplement the **Data Center Master Plan** with separate, detailed plans to include:
  - a. **Data Center Operations Plan** defined in Paragraph 4, Technical Processes.
  - b. **Data Center System Test Plan** defined in Paragraph 4.1.1, Testing Support
  - c. Data Center System Security Plan defined in Paragraph 4.2.9, System Security
3. The Data Center shall provide data, information and plans to the Contractor in support of the Contractor project management tasks as defined in the Contractor SOW, Paragraph 3, Project Planning.
  - a. The Data Center shall define Data Center resources and processes required to support the Contractor's Project Master Plan.

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- b. The Data Center shall define and document Data Center tasks, task dependencies, milestones, deliverables, resource loading, effort estimates required to support the Contractor's Master Work Plan.
  - c. The Data Center shall estimate and document Data Center efforts and budget required to support the Contractor's Budget and Schedule Planning.
4. The Data Center shall develop and deliver **Data Center Work Plans** based on a Work Breakdown Structure (WBS) as described in **Project Management Body of Knowledge (PMBOK)** Chapter 4.1, Project Plan Development, Chapter 5.3 Scope Definition, and Chapter 6, Time Management. The WBS is defined in **PMBOK** Paragraph 5.3.3.1, Outputs from Scope Definition.
  - a. The Data Center shall develop a **Data Center Site Preparation Work Plan** that includes the tasks, deliverables, milestones, resources and critical path for the Data Center for the Data Center Site Preparation described in Paragraph 4.1.1.
  - b. The Data Center shall develop and deliver a **Data Center DDI Support Work Plan** that includes the tasks, deliverables, milestones, resources and critical path for the Data Center for the DDI Phase.
  - c. The Data Center shall develop and deliver a **Data Center Maintenance Work Plan** for each CMIPS II system release that involves changes or upgrades to the Data Center during the CMIPS II M&O Phase.

### 3.2 Control Processes

The purpose of the control processes is to monitor, control, and report on the project scope, activities, expenditures, resources, issues, and risks to ensure the Data Center meets the Project budget, schedule, and business objectives.

The Contractor shall be responsible for the control processes as defined in the Contractor SOW, Paragraph 3.2, Control Processes. The Data Center shall support the Contractor in managing these control processes including but not limited to:

#### 3.2.1 Schedule and Budget Control

The Data Center shall manage Data Center resources and processes required to support the Contractor Project Master Plan. The Data Center shall monitor and report the status of Data Center tasks, task dependencies, milestones, deliverables, resource loading, effort estimates required to support the Contractor's Master Work Plan. The Data Center shall track and report the Data Center efforts and budget required to support the Contractor Budget and Schedule Planning.

#### 3.2.2 Issue Management

1. The Data Center shall identify Data Center issues related to CMIPS II to meet the Issue Management requirements defined in the Contractor SOW, Paragraph 3.2.4, Issue Management.

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2. The Data Center shall report to the State Project Manager the issue identification and status activities related to the issues.
3. The Data Center shall resolve issues assigned to the Data Center for resolution within the time limits approved by the State Project Manager.

### 3.2.3 Change Management

The process by which the Data Center implements changes to any CMIPS II Configurable Item (CI) under Data Center control shall comply with the requirements defined in the Contractor SOW, Paragraph 3.2.5, Change Management Plan.

1. The Data Center change management process shall support the CMIPS Project Office Change Management Plan (CMP) to include, but not limited to:
  - a. The Data Center shall identify and submit proposed infrastructure changes, impact, and schedule in writing to the CMIPS Project Change Management Board (PCMB) in accordance with the CMP.
  - b. If a change is approved by the PCMB, the Data Center shall implement the changes.
    - i) The Data Center shall control changes to Configured Items according to the CMIPS Configuration Management Plan.
    - ii) The Data Center shall implement changes in accordance with the CMIPS Maintenance Plan.
    - iii) The Data Center shall coordinate changes and implementation schedule to the CMIPS II infrastructure with the CMIPS Project Office and the Contractor.
    - iv) The Contractor will conduct regression testing. The Data Center coordinate with the Contractor in the regression testing.
    - v) The Data Center shall report the status and the finish dates of the changes to the CMIPS Project Office Project Manager or his/her designee at least weekly from the time it is approved to the time it is fully implemented and accepted.
  - c. As part of the **Monthly Project Status Report**, the Data Center shall report the number of proposed changes submitted, the number approved, the number in progress, and the number completed in the reporting period.

### 3.2.4 Configuration Management

1. The Data Center shall control the Data Center equipment and software configuration in accordance with the CMIPS II Configuration Management Plan defined in the Contractor SOW, Paragraph 3.2.6, Configuration Management.
2. Changes by the Data Center that are not directly related to CMIPS II, but have the potential of affecting availability or performance, shall be provided in writing to the State Project Manager not less than one (1) month prior to executing the change. In addition the change shall be made at a time that will not impact CMIPS II online availability and shall be subject to the approval of the State Project Manager.



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### 3.2.5 Risk Management

1. The Data Center shall identify Data Center risks related to CMIPS II in accordance with the Risk Management process defined in the Contractor SOW, Paragraph 3.2.7, Risk Management.
2. The Data Center shall report to the State Project Manager the identified risks and the status of risk management activities assigned to the Data Center.
3. The Data Center shall accomplish risk management activities assigned to the Data Center for resolution within the time limits approved by the State Project Manager.

### 3.2.6 Subcontractor Management

The Data Center shall be responsible for the coordination, control, and performance of Subcontractors, if any. The Subcontractor shall be subject to the same standards as the Data Center. The Data Center shall prepare and execute a **Data Center Subcontractor Management Plan** in accordance with IEEE 1058, PMBOK Chapter 12.1.3.1, Procurement Management, and PMBOK Chapter 12.5, Contract Administration.

### 3.2.7 Project Management Reporting

1. The Data Center shall provide the data and information to support the Project Management Reporting requirements defined in the Contractor SOW, Paragraph 3.2.9, Project Management Reporting.
2. The Data Center shall monitor the Data Center activities according to approved plans. The Data Center shall report activity status as part of the Contractor Monthly Project Status Report. The monthly report shall include, but is not limited to:
  - a. Description of accomplishments in the reporting period
  - b. Issues related to Site Preparation.
3. The Data Center shall identify, collect and report the Data Center related project metrics defined in the Contractor SOW, Paragraph 3.2.8, Project Metrics.

### 3.2.8 Deliverables

The Data Center shall meet the requirements for deliverables as defined in the Contractor SOW, Paragraph 3.2.3, Deliverables Standards and Acceptance. In addition the Data Center shall support the Contractor in meeting these requirements.

## 4 TECHNICAL PROCESSES

The technical processes include the services required to acquire, test, implement, operate, and maintain the Data Center to support CMIPS II and IHSS/PCSP Program. The Data Center shall provide the CMIPS Project Office all necessary (as determined by the CMIPS Project Office)

access to the CMIPS II production environment, programs, data, and system resources to validate and verify the technical processes and system requirements.

## **4.1 CMIPS II DDI Support**

1. The Data Center shall support the Contractor in preparing and executing the following Contractor plans:
  - a. System Development Plan
  - b. System Test Plan
  - c. Statewide Implementation Plan
  - d. Pilot Operation Plan
  - e. Operations Plan to include:
    - i) Capacity Management Plan
    - ii) Data Distribution Plan
    - iii) Backup and Recovery Plan
    - iv) Disaster Recovery Plan
    - v) Customer Service Plan to include Help Desk support

### **4.1.1 Data Center Site Preparation**

1. The Data Center shall coordinate with the Contractor for the purchase and delivery of the equipment and software.
2. The Data Center shall define and execute a standard process for receiving equipment.
3. The Data Center shall define and execute a standard process for installing equipment.
4. The Data Center shall test the installed equipment and software to ensure it is operating properly according to the **Data Center Master Plan**. The Data Center shall document and deliver **Initial Data Center Systems Test Results** to the State Project Manager within fifteen (15) business days of test completion for each installation.
5. The Data Center shall participate in the Contractor Production System Readiness Review to be conducted at least two (2) calendar months prior to the first County Deployment to ensure implementation preparation activities and deliverables are successfully completed. The Data Center shall provide the Contractor with data and information needed to document the results of the reviews in the Contractor-prepared Production System Readiness Reports as defined in the Contractor SOW, Paragraph 4.5.4.3, Site Preparation.

### **4.1.2 Wide Area Network Installation**

The Data Center shall be responsible for specification, procurement and installation of all services required for Wide Area Network connectivity between the Data Center and county IHSS sites.

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1. The Data Center shall provide consulting services to the project in defining the most effective connectivity option available for each CMIPS II site.
2. The Data Center shall support the Contractor in defining network implementation tasks in the Master Work Plan.
3. The Data Center shall implement and certify connectivity for each CMIPS II site at least one week prior to the link being required for tasks in the Contractor's Master Work Plan, e.g., Data Cleanup activities.
4. The Data Center shall support the Contractor in reporting the status of network implementation activities in the Project Monthly Status Report.

### 4.1.3 CMIPS II System Test and Evaluation

1. The Data Center shall support the Contractor in performing the CMIPS II testing required in the Contractor SOW, Paragraph 4.2, System Test and Evaluation.
2. Although the contractor will be responsible for conducting and reporting on each phase of CMIPS II system testing within the development lifecycle, some or all testing will be performed on the system(s) supported at the Data Center. The Data Center shall provide testing support in three areas:
  - a. CMIPS II infrastructure preparation and support
    - i) For all testing on systems residing at the Data Center, the Data Center shall ensure that the CMIPS II infrastructure is current, stable and fully operational prior to each test.
  - b. CMIPS II infrastructure metrics recording and reporting
    - i) During the performance and stress test phases of the project the Data Center shall support the effort in collecting network, system and database statistics during the tests. In addition the Data Center shall provide analytical services to support the Contractor and project in interpreting the metrics collected, and providing recommendations to improve performance.
  - c. CMIPS II Infrastructure Testing
    - i) The Data Center shall test all Configurable Items (CI's) under its responsibility to ensure that the CMIPS II infrastructure is prepared for any production release.
    - ii) The Data Center shall deliver, maintain and execute a **Data Center System Test Plan**. This plan shall be tailored from the requirements defined in the Contractor SOW, Paragraph 4.2.2, Test Planning and Deliverables. The plan shall include how the plan has been tailored from these requirements.

### 4.1.4 Statewide Implementation

1. The Data Center shall support the Contractor in performing the CMIPS II implementation required in the Contractor SOW, Paragraph 4.5, System Implementation to include:
  - a. Statewide Implementation Planning

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- b. System deployment preparation
- c. Pilot Operation
- d. County deployment
- e. Post Implementation Review

### **4.1.4.1 Statewide Implementation Planning**

The Data Center shall support the Contractor in preparation of a Statewide Implementation Plan defined in the Contractor SOW, Paragraph 4.5.2, Statewide Implementation Planning. The Data Center shall identify and document key milestones, methods, equipment requirements, schedules, high-level activities, staffing, deliverables, and success criteria that will be necessary to successfully implement CMIPS II infrastructure and operation located at the Data Center.

### **4.1.4.2 System Deployment Preparation**

1. The Data Center shall prepare the Data Center system(s) for CMIPS II deployment defined in the Contractor SOW, Paragraph 4.5, System Implementation and Data Center Master Project Plan.
2. The Data Center shall verify that Data Center system(s) meet the requirements in the **Data Center Site Specification** according to the **Data Center Master Plan**. The Data Center shall deliver a **Data Center Readiness Report** to the State Project Manager at least fifteen (15) business days after verification.
3. The Data Center shall support the Contractor in testing all interfaces to verify that they meet the requirements defined in Contractor TECHNICAL REQUIREMENTS - System Requirements Specification, Paragraph 7.9, External Interface Architecture, and Exhibit 6-1, Interfaces.

### **4.1.4.3 Pilot Operation**

1. The Data Center shall support the Contractor in the development of a Pilot Operation Plan defined in the Contractor SOW, Paragraph 4.5.7, Pilot Operation.
2. For the duration of the Pilot Operation Period, the Data Center shall implement the **Data Center Operations Plan (DCOP)** and operate the CMIPS II infrastructure to the requirements of the production environment.

### **4.1.4.4 Site Deployment**

The Contractor will be responsible for deploying the initial and maintenance releases of the CMIPS II application to all affected work sites in all fifty-eight (58) counties in California.

1. The Data Center shall prepare, deliver, and maintain a **Data Center Site Deployment Checklist** that lists all Data Center activities required to deploy the system to each site.

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2. Prior to each county implementation, the Data Center shall participate in a County Deployment Readiness Review as defined in the Contractor SOW, Paragraph 5.3.4.3, Milestone Reviews, to verify the county has specified connectivity and access to the Data Center system(s). The Data Center shall deliver verification of the **Data Center Site Deployment Checklist** completion as part of the County Deployment Readiness Review.
3. The Data Center shall support each County Deployment according to plans.
4. The Data Center shall monitor system performance for a period two days prior to and two days following each site deployment.
  - a. The Data Center shall determine and document expected system performance guidelines for each deployment.
  - b. The Data Center shall report any performance that does not meet the expected system performance guidelines to the State Project Manager within two (2) hours and provide resources to resolve the problem.
  - c. The Data Center shall deliver a **Site Deployment Performance Monitoring Report** for each deployment to include:
    - i) System Availability
    - ii) Unscheduled Downtime with explanation and resolution
    - iii) System resource utilization through the month including but not limited to CPU, Network, Memory and Disk compared to expected performance
    - iv) Explanation of any performance anomalies during the reporting period and activities to resolve and prevent further occurrences.
5. The Data Center shall participate and provide supporting information for each Post Site Implementation Review defined in the Contractor SOW, Paragraph 4.5.10, Implementation Reviews and Paragraph 5.3.4.3, Milestone Reviews.

### **4.1.4.5 Post Statewide Implementation Review**

One calendar month after completion of successful implementation of the system in CDSS and all fifty-eight (58) counties, the Data Center shall participate in a Post Statewide Implementation Review defined in the Contractor SOW, Paragraph 5.3.4.3, Milestone Reviews.

### **4.1.4.6 Release Readiness Review**

The Data Center shall participate in Release Readiness Reviews as defined in the Contractor SOW, Paragraph 4.2.6, Release Readiness Review, prior to the release of any Configurable Item (CI) into the production environment.

## **4.2 Data Center Operations Services**

The Data Center will provide all services for the daily operation and administration of the CMIPS II.

#### 4.2.1 Data Center Operations Plan

1. The Data Center shall develop, maintain, deliver and execute a **Data Center Operations Plan (DCOP)** that defines how the Data Center shall meet the requirements of Data Center Services defined in Paragraph 4.2, Data Center Operations Services.
2. The **Data Center Operations Plan** shall support the Contractor in executing the Contractor Operations Plan and supplemental plans to include:
  - a. Capacity Management Plan
  - b. Data Distribution Plan
  - c. Backup and Recovery Plan
  - d. Disaster Recovery Plan
  - e. **Customer Service Plan** to include Help Desk support.

#### 4.2.2 System Availability

The Data Center shall ensure CMIPS II and its associated infrastructure at the Data Center are stable and operate to meet or exceed the required system availability and performance requirements as defined in the Contractor TECHNICAL REQUIREMENTS - System Requirements Specification (SyRS), Paragraph 9, Performance.

#### 4.2.3 Physical Security

The Data Center shall maintain and manage physical security of the systems to protect them from loss, damage and/or unauthorized access as defined in the Federal Information Processing Standards (FIPS) Publication 31, Section 5, Physical Protection of Automated Data Processing Facilities. FIPS publications can be found at [www.csrc.nist.gov/publications/fips](http://www.csrc.nist.gov/publications/fips). The Data Center will manage and maintain physical security twenty-four (24) hours a day, seven (7) days a week.

1. The Data Center will provide physical access to the system(s) for staff authorized in writing by the State Project Manager.
2. The Data Center shall be available to provide immediate physical access for authorized personnel to the system(s) twenty-four (24) hours a day, seven (7) days a week. If the Data Center cannot provide automated access to the system(s), the Data Center shall provide staff to allow authorized personnel physical access to the system(s).

#### 4.2.4 Hardware Support

The Data Center shall manage the maintenance of all host hardware that is the responsibility of the Data Center as part of the base service level including coordination of maintenance activities with the Contractor. This shall include:

1. Support of the Contractor in ensuring all installation lead-times are clearly identified in the Project Master Plan and Project Master Work Plan.

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2. Maintenance of hardware while still meeting agreed service levels.
3. Report of completed and planned maintenance activities to the CMIPS Project Office.
4. Support of the Contractor in upgrading or replacing any hardware as required.
5. Identify hardware warranty and maintenance periods and renewals.
6. Management of hardware maintenance agreements for service, with sufficient response time to allow the Contractor to maintain system availability requirements. If such agreements are not in place the Data Center shall provide sufficient spare parts and the resources to support the hardware internally.
7. Manage all changes to supporting hardware.
8. The Data Center shall follow the Change Management plan for all changes to CI's and provide the CMIPS Project Office with monthly updates as part of the Contractor's Monthly Project Status Report.
9. The Data Center shall adhere to the Configuration Management Plan approved by the State Project Manager that was delivered by the Contractor.

#### **4.2.5 Software Support**

1. The Data Center shall maintain, operate and manage the base software infrastructure of CMIPS II located at the Data Center including but not limited to:
  - a. Any firmware residing on the systems
  - b. All operating systems
  - c. All database management systems excluding specific database instances maintained by the contractor
  - d. All central system management tools, e.g., HP Openview, BMC Patrol
  - e. All centralized backup solutions
  - f. All centralized resource scheduling solutions.
2. The Data Center shall maintain and manage, in coordination with the Contractor, all host system software as part of the base level of service. The Data Center shall maintain, at the appropriate level, all tools and related data used for CMIPS II maintenance and operation. The Data Center shall perform the following maintenance tasks:
  - a. Installation and configuration of all software to the Contractor's specifications
  - b. Support of the Contractor in ensuring all installation lead-times are clearly identified in the Project Master Plan and Project Master Work Plan
  - c. Identify software warranty and maintenance periods and renewals
  - d. Maintain all licensing agreements, warranty service and support contracts
  - e. Manage and perform all changes to supporting software

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- f. Report on all completed or planned system support maintenance activities to the CMIPS Project Office on a monthly basis.
3. The Data Center shall ensure that the appropriate resources with the experience in supporting the software infrastructure of CMIPS II are available. These resources shall be available during the times of CMIPS II on-line availability. At any other time, these resources shall be actively working on known or reported issues within two hours.
4. The Data Center shall ensure that software under its control is upgraded not longer than eighteen (18) months after the software is released for the hardware platform, subject to the approval of the State Project Manager.
5. In the event that one or more software products is withdrawn from public sale the Data Center shall define, deliver, and execute a plan to implement an alternate solution within twenty-four (24) months of the withdrawal notice.
6. The Data Center shall follow the Change Management Plan for all changes to CIs and provide the CMIPS Project Office with monthly updates as part of Contractor's Monthly Project Status Report.
7. The Data Center shall adhere to the Configuration Management Plan approved by the State Project Manager that was delivered by the Contractor.

#### **4.2.6 Environment Control**

The Data Center shall provide an operating environment to operate the system that meets the specification defined by the hardware manufacturer. This environment shall include:

1. An uninterruptible power supply with battery backup to protect the systems from power fluctuations of the main power feed and alternate power source, e.g., generator.
2. An alternate power source to the main power feed capable of supporting the computing systems and the environmental equipment, e.g., generator.
3. A physical environment that protects the system from elements including but not limited to wind, fire, rain and flooding.
4. Sufficient floor space to allow the system to be easily and effectively maintained.
5. Temperature and lighting control.
6. A raised floor if the vendor solution requires it.
7. Fire detection alarms and fire suppression equipment.

#### **4.2.7 System Operation**

1. The Data Center shall support system operation including all hardware and support software located at the Data Center.



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2. The **DCOP** defined in Paragraph 4.2.1, Data Center Operations Plan shall include the following System Operation requirements:
  - a. Description of functions, tools, and methodology required to support the CMIPS II infrastructure.
  - b. Document all operational procedures including procedures for recovery from error conditions.
  - c. Defining schedule for operational tasks and batch processes.
  - d. Processes and procedures for all tasks in the operations environment.
  - e. Roles and responsibilities for operations, technical support, and help desk personnel.
  - f. Problem identification, notification and resolution procedures for all tasks in the environment.
  - g. Contact lists for personnel requiring notification of problems in the environment.
  - h. Escalation procedures for all tasks in the environment.
  - i. Hardware and software inventories.
  - j. Procedures for scheduled maintenance of the environment, e.g., database maintenance.
  - k. Management of all media required for interfaces.
3. The Data Center shall provide operational support and monitoring twenty-four (24) hours a day, seven (7) days a week.
  - a. The Data Center shall integrate CMIPS II infrastructure monitoring tools into the centralized monitoring environment.
  - b. In the event the system becomes unavailable for any reason, the Data Center shall immediately contact the designated Contractor support staff and State Operations Manager.
  - c. The Data Center shall monitor system performance. If system performance service levels are not met, the Data Center shall provide immediate notification to the designated Contractor support staff and State Operations Manager and provide appropriate technical resources to correct the issue.
  - d. The detailed performance data and the tools used to manipulate the data shall be available to the State Operations Manager on request within two (2) business days of the request.
  - e. The Data Center shall support the Contractor in monitoring response times on a client located outside HHSDC on the WAN. Upon the written request of the State Project Manager, the Data Center shall collect and document time spent in each component server and network to quantify central processing and network times components of the total user response time.
4. The Data Center shall deliver a detailed **Outage Analysis Report** in the event the system becomes unavailable for any reason.

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5. The Data Center shall make available all media (other than electronic transfers) produced by CMIPS II not more than two (2) hours after it is produced for Contractor pickup.

#### **4.2.8 Network Capacity Planning and Management**

The Data Center shall be responsible for all components of network capacity planning and management including upgrading or adding hardware or software to ensure that system service levels continue to be met. The Data Center shall be responsible for all network components connecting the sites to HHSDC. The Data Center shall provide local network management services including but not limited to LAN Management, firewall management, network address translation and network security.

The Data Center shall be responsible for the Data Center LAN capacity planning and performance monitoring. In addition the Data Center shall provide, at the State Project Manager's request, detailed network utilization reports for any of the network links to IHSS sites for the period of time requested within two business days.

#### **4.2.9 Performance Monitoring and Management**

The Data Center shall be responsible for the performance management and monitoring of all aspects of the CMIPS II infrastructure including, but not limited to, all hardware located at the Data Center, all Data Center LAN networks, operating systems, and database management systems and enterprise management tools.

The Data Center shall continually monitor the CMIPS II infrastructure and if resources become unavailable or if performance levels drop below those required for the Contractor to maintain the Performance and Availability metrics as defined in the Contractor TECHNICAL REQUIREMENTS - System Requirements Specification (SyRS), Paragraph 9, System Performance, the Data Center shall notify the Contractor within fifteen (15) minutes.

Should an alternate resource (e.g., generator), or redundant resource (e.g., mirrored disk drive), or a non-critical component (e.g., a PC workstation used by Operations) of the CMIPS II infrastructure become unavailable, the Data Center shall notify the Contractor in not more than 2 hours.

The Data Center will be responsible for management and monitoring of all WAN circuits and equipment connecting HHSDC to CMIPS II users.

The Data Center will support the Contractor in system performance monitoring and management by providing performance data and analytical support in order for the Contractor to effectively communicate status to the Project.

#### **4.2.10 System Security**

The Contractor is required to develop a System Security Plan to ensure the security of the system and the confidentiality of the data.

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1. The Data Center shall support the Contractor in development and maintenance and of the System Security Plan.
2. The Data Center shall manage the system security in accordance with the System Security Plan.
3. The Data Center shall consider and evaluate potential security risks and propose measures that will minimize those risks. The Data Center shall support annual onsite security audits conducted by CDSS IV&V personnel.
4. The Data Center shall meet the requirements of Federal, State, and CDSS regulations and policy regarding system and data security and confidentiality in accordance with System Security Plan.
5. The Data Center shall manage all accounts on the system that provide system access. User application accounts will be managed by county personnel or by the Contractor.
6. The Data Center shall not assign privileged accounts to State or Contractor personnel without the explicit written approval of the State Project Manager. If personnel require privileged system access to perform support activities Data Center personnel will provide supervised access. This service should be available twenty-four (24) hours a day, seven (7) days a week, three hundred sixty-five (365) days a year.
7. The Data Center shall maintain the operating system at a minimum C2 rating under the Trusted Computer System Evaluation Criteria published by the [NCSC](#) (5200.28-STD). DEPARTMENT OF DEFENSE, TRUSTED COMPUTER SYSTEM EVALUATION CRITERIA, DOD 5200.28-STD, published by the National Computer Security Center (NCSC) or its equivalent under the Common Criteria Evaluation and Validation Scheme (CCEVS).
8. The Data Center shall maintain system security in accordance with ISO 17799.

### 4.2.11 Data Distribution

The Data Center shall be responsible for ensuring that the CMIPS II application infrastructure can effectively and securely distribute data between CMIPS II, its external interface partners and users. This data will include both regularly scheduled exchanges between interface applications and user requested data exchanges, e.g., report downloads.

The Data Center shall manage all media distribution, e.g., tapes involved in interfaces and shall provide and manage said media.

The Data Center shall support the Contractor in development, maintenance and execution of a Data Distribution Plan as defined in the Contractor SOW, Paragraph 4.4.2, Data Distribution.

### 4.2.12 Backup and Recovery

The system operates under statutory timeline requirements set by federal and State law to ensure that no undue hardship is imposed on the population of Recipients and Providers.

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1. The Data Center shall support the Contractor in development and execution of a Backup and Recovery Plan that describes in detail the processes and procedures to satisfy the following requirements in both production and non-production environments:
2. The Data Center shall execute the approved Backup and Recovery Plan according to the schedule in the plan.
3. The Data Center shall ensure the Backup and Recovery Plan includes elements to support the backup and recovery of all system objects, CIs, and data to permit recovery of critical files to the last committed transaction and non-critical files to the prior business day.
4. The Data Center shall, prior to production, support the Contractor to successfully test and publish the results of the backup and recovery procedures.
5. The Data Center shall ensure that the plan includes the tasks to support the Contractor in restoring the application to complete functionality in no longer than six (6) hours.
6. Although the Contractor will be responsible for coordinating off-site media storage, the Data Center or its off-site storage vendor shall transport the media and shall ensure that all backup media, to be stored off-site, is transported according to the approved plan.
7. The Data Center shall procure and manage all media used by CMIPS II for backups.

### 4.2.13 Disaster Recovery

1. A disaster is the loss of CMIPS II processing facility, e.g., complete loss of the Data Center due to a major catastrophe such as fire, flood, or earthquake. Successful recovery assumes that the system and application are available and that the users can perform the same business activities as before the disaster. The Data Center shall support the Contractor in development and execution of a Disaster Recovery Plan. The Data Center shall provide the facility, hardware, network, personnel, and file backups as directed by the Disaster Recovery Plan. The Disaster Recovery Plan shall describe in detail the processes and procedures to satisfy the following requirements in production environments:
2. The Data Center shall ensure the Disaster Recovery Plan documents how, upon complete loss of the enterprise environment, the operational application functions can be successfully recovered to the end of business on the prior business day within three (3) days, and non-critical application functions within five (5) days of the disaster.
3. The Data Center shall, prior to production, support the Contractor to successfully test and publish the results of the disaster recovery procedures prior to Production system Readiness Review, as defined in the Contractor SOW, Paragraph 4.4.8 Disaster Recovery, and at least annually thereafter.

### 4.2.14 Annual Audits

To ensure the cost effectiveness of Data Center services, the Data Center shall be audited on an annual basis.

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1. The Data Center shall support an **Annual Rates Audit** comparing its rates with State Data Centers and comparable private sector data centers.
2. The Data Center shall support a CDSS IV&V audit of its processes and procedures to ensure compliance with Capability Maturity Model (CMM) Level 2 and other Federal and State requirements defined within this document.

### 4.2.15 Customer Service

The Contractor shall be the primary point of contact for CMIPS II customers. However if initial analysis by the Contractor indicates that the problem is the responsibility of the Data Center, the Data Center shall have lines of communication available to allow effective and rapid issue resolution. The Data Center shall designate one or more points of contact for the Contractor. The Data Center points of contact shall be available at all times when the system is scheduled to be available and calls shall be responded to within 10 minutes. Outside of available hours Contractor inquiries shall be responded to in not more than two hours.

The Data Center shall document, track and update each issue from initiation through resolution and report each issue to the Contractor for inclusion in the **Monthly Project Status Report**.

### 4.2.16 System Operations Reporting and Metrics

1. The Data Center shall deliver a monthly **Data Center Operations Management Report** to the State Project Manager and CDSS IV&V which includes but is not limited to:
  - a. Summary of data center operational issues arising in the current timeframe and status of any unresolved issues from prior timeframes
  - b. Status of any planned Data Center infrastructure, hardware, and/or software changes
  - c. Data Center system performance metrics and compliance to include:
    - i) System Availability
    - ii) Scheduled Downtime with explanation
    - iii) Unscheduled Downtime with explanation and resolution
    - iv) Average system response times both over the period and specifically for the one (1) hour that system response was slowest. This information shall be available at the individual task level
    - v) System resource utilization through the month including but not limited to CPU, Network, Memory and Disk
    - vi) Batch processing performance during the month including job runtimes
  - d. Explanation of any performance anomalies during the reporting period and activities to resolve and prevent further occurrences
  - e. Explanation of any failures and activities to resolve any potential for future occurrences
  - f. All planned operations and maintenance activities scheduled for the next month
  - g. Summary of operations and maintenance activities.

2. The Data Center shall submit to the State Project Manager a **Data Center Daily Production Status Report** including, but not limited to:
  - a. Summary of all problems by category
  - b. Description of all critical or serious problems
  - c. Summary of all failures to achieve service level objectives with explanations.

### **4.3 Data Center Maintenance and Enhancements**

The Data Center shall develop and deliver a **Data Center Maintenance Work Plan** for each system release that involves changes or upgrades to the Data Center during the CMIPS II M&O Phase as stated in Paragraph 3.1, Project Planning.

### **4.4 Data Center Program Support**

The Data Center shall operate the infrastructure hardware and software to support the Contractor Program Support defined in the Contractor SOW, Paragraph 4.6, Program Support.

## **5 SUPPORTING PROCESSES**

### **5.1 Communication**

The Data Center shall support the Contractor in preparation, delivery and execution of a Project Communication Plan that ensures comprehensive and timely communication between all CMIPS II stakeholders and the CMIPS Project Office and as defined in the Contractor SOW, Paragraph 5.1, Communication.

### **5.2 Configuration Management**

Configuration Management is a process of identification, control, and accountability for work products to ensure product quality. The Data Center shall implement a configuration management process on the CMIPS II infrastructure in accordance with [IEEE 828](#) Configuration Management Plans and the Contractor Configuration Management Plan.

1. The Data Center shall attend weekly Configuration Control Board meetings. The Data Center shall provide staff for the Configuration Control Board that have working level technical expertise to evaluate and organize system modifications into releases.
2. For each CMIPS II release, the Data Center shall support the Contractor in conducting a Functional and Physical Configuration Audit, (**FPCA**) based on [IEEE 1042-1987](#), Standard for Software Configuration Management, Paragraph 3.3.4, Audits and Reviews, to identify and describe the functional changes implemented in the release and the affected system components, deliverables, users, and documentation.
3. The Data Center shall summarize its configuration management activities to the Contractor for inclusion in the Contractor **Monthly Project Status Report**.

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4. For Quality Assurance of the configuration management Process, the CDSS IV&V will conduct, at least annually, an audit of the Data Center's configuration management process and configured items to ensure they are complying with the Configuration Management Plan. The Data Center shall provide the CMIPS Project Office access to configured items and configuration management tools and records to conduct the configuration management audit.

### 5.3 Quality Assurance

The Data Center shall provide access to data, processes and procedures, documentation, systems and support staff to support the Contractor and State quality assurance processes defined in the Contractor's Quality Assurance Plan and the CMIPS Project Office's Quality Assurance Plan. The Data Center shall also support reviews and audits conducted by the CDSS IV&V, and CHHSA and Department of Finance/Technology Oversight System Unit (DOF/TOSU) Independent Project Oversight. In addition the Data Center shall support external audits at the request of the State Project Manager. These may include audits by the Bureau of State Audits (BSA), CMS and the independent financial audit team.

The Data Center shall support verification activities in accordance with the Verification and Validation Plan in providing access to data, process and procedure documentation, systems and support staff.

The Data Center shall participate in the Contractor milestone reviews as defined in the Contractor SOW, Paragraph 5.4.4.3, Milestone Reviews. The Data Center shall provide the Contractor with Data Center-related data and information required for the milestone reviews.

### 5.4 Issue Resolution

1. The Data Center shall support the CMIPS Project Office Issue Management Plan. The Data Center shall communicate all issues related to the CMIPS II infrastructure to the State Project Manager and shall provide status of each issues in the weekly status meeting and the Monthly Project Status Report.
2. The Data Center shall, with the CMIPS Project Office, develop and agree upon an Issue escalation Process for elevating issues that cannot be resolved internally. This plan shall be complete not more than ninety (90) days after this statement of work is initiated.
3. Issues that require hardware or software modifications to the CMIPS II infrastructure are subject to Configuration Management.

### 5.5 Division of Responsibilities

The Data Center shall support the Contractor in the development and maintenance of a Division of Responsibility Matrix the clearly identifies which party, Contractor, Data Center or HHSDC Networks is responsible for which task. An example of this matrix can be found in Exhibit 6-2 Division of Responsibilities Matrix. The matrix shall contain responsibilities for each system required in the CMIPS II infrastructure solution.